Attachment 14-A
Design for Environment
General Analytical Protocol

A. Introduction

Presented below is a protocol for the Design for Environment (DfE) program by which the Company will assure that all material changes in equipment or operations are implemented, based on appropriate analysis and consideration of the implications of design and technology selections as they relate to environmental and natural resource impacts, so as to optimize performance from that perspective.

B. Objectives

The DfE program is a systematic way of assuring that whenever there is a material alteration of a production unit or system, that the alteration is designed taking into account the significant environmental and natural resource aspects and impacts involved, the technically and economically feasible alternative approaches that are available or that may be designed, the product quality that the Company must maintain and other significant production and market-response factors.

The result of this multiple-factor analysis will be production processes, control technologies, and/or work practices that achieve an optimal balance of production, quality and environmental control that also meets the requirements of regulation and relevant markets.

C. Approach

The DfE program will focus on designing steel mini-mill production processes to maximize recycling efficiency while minimizing their potential adverse environmental impacts. The DfE program will also take into account upstream and downstream environmental effects.

While the DfE program could operate as a stand-alone program, the Nucor DfE program, in conjunction with the Operate for Environment (OfE) program, will serve as the technical foundation for the Nucor Environmental Management System (EMS). The DfE component of the Nucor EMS will enhance the ability of the EMS over time to mitigate impacts with

technology that presently may not be viable but, in the future may become viable.

The evaluation of "reasonable" alternatives will be a key element of the DfE approach. Some alternatives can be eliminated at an early level of review as clearly failing to meet threshold feasibility criteria (such as relocating a facility outside of the target market instead of using a different site within the target market). The "reasonable" alternatives will be evaluated more closely for economic feasibility, technical feasibility, operational performance, operational feasibility and environmental performance.

Like other broadly applicable analytical tools -- such as life-cycle analysis, cost-benefit analysis, and risk assessment -- at its core, the DfE approach is a common-sense conceptual paradigm, that needs to be adapted to the demands of the issue at hand. A "coarse screen" level of analysis is appropriate for lower impact changes; a more detailed inquiry would be appropriate for changes that may involve significant impacts. The first principle in maximizing the usefulness of the DfE approach is to set and maintain the appropriate level of analysis.

D. Who performs the analysis

The DfE analysis will be conducted by Nucor technical and operations experts in conjunction with external experts as appropriate. As part of the EMS, the DfE approach assures that units are upgraded when physical changes occur.

E. Steps in DfE Analysis

As indicated above, the level of detail in the DfE factor-analysis will be proportionate to the potential environmental impact associated with the planned change. The analysis includes the following steps:

1. Determine whether the action in question meets the "significance" threshold for initiating the DfE analysis. The threshold may be defined in terms of investment dollars, expected change in emissions, or other relevant regulatory and operational variables. This approach will be consistent with the Nucor EMS approach to evaluating significant environmental aspects and impacts.

2. Define the objective of the project and the scope of the unit operation to be considered.

3. Review available options for meeting the objective within the scope of the unit operation to be considered. Options include:

a. Technology in use in the industry;
b. Practices in use in the industry;
c. Substitute materials available;
d. Technology in use in other industries that could be adapted to use in mini-mills;
e. Practices in use in other industries that could be adapted to use in mini-mills;
f. Potential for implementation of developing technology as appropriate; and
g. Demonstration projects to test technologies and/or practices that may be effective.

4. Determine the optimum approach to achieve objectives - operational and environmental. This may involve conducting a project/feasibility analysis (to be done by internal or external technical personnel) to assess options, develop recommendations, or evaluate a decision. For new equipment and modernization of existing equipment, the DfE factor analysis will include the following technical, economic and regulatory considerations:

a. Overall effectiveness in reducing environmental impacts (on site and off site emissions per ton)

b. Efficiency of control (energy or other resource consumed per unit of emissions reduction)

c. Reliability/availability of control (impact or down-time, start-up, shut-down, etc.)

d. Capital cost

e. Impact on production

f. Impact on product quality

g. Impact on recycling efficiency

h. Impact on pollution prevention efficiency

i. Impact on disposal cost

j. Impact on near-term and long-term scheduling and options

k. Regulatory implications

l. Market location and viability

m. Employee health and safety issues

n. Other aspects & impacts peculiar to circumstances

5. Analysis of these factors may be performed in accordance with an algorithm such as the following:

Identify Impact				
What Affects the Impact?				
Equipment	**Raw Materials**	**Operating Practice**	**Physical Layout**	**Control Technology**
Other Types	What is available	Need new procedure	Can something be changed?	Evaluate all types
Evaluate Each "Reasonable" Alternative				
Implement Appropriate Alternatives				

6. Select a vendor. The company may issue an Request for Proposal (RFP)/Request for Quote (RFQ). The RFP/RFQ may contain target criteria with respect to environmental performance when appropriate.

7. Consult with EPA. Nucor will consult with EPA on changes that, as a discrete modification, would result in an increase in Potential To Emit (PTE) that would trigger New Source Review (NSR)/Prevention of Significant Deterioration (PSD)/Best Available Control Technology (BACT) review.

G. Implement conclusions.

The final stage of the DfE analysis will include implementation of the those findings that are appropriate in light of the analysis. For major DfE analyses, Nucor will produce a report of the analysis, the alternatives implemented.

H. Integrate with Operate for Environment (OfE) program.

As part of the OfE module of its EMS, Nucor will develop and implement operating procedures as appropriate for the equipment or systems put in place through the DfE program to see that objectives are achieved.

I. Reporting.

1. External reporting. The Company will notify the relevant permitting authority of material changes made in accordance with legal requirements so that the agencies are informed of current operating scenarios. Administrative permit amendments may be appropriate in some instances.

2. Internal reporting. Facilities will provide results of DfE analysis to the Corporate Environmental General Manager for review and approval and for posting on the Company intranet for reference by other facilities as appropriate.

J. Environmental Performance Reporting.

Divisions will evaluate environmental performance of operational changes determined through the DfE process and will include results with the DfE analysis as an amendment. Reporting may also be required to the relevant Agencies.